

CLAIMS

What is claimed is:

A degater comprising:

first and second degater halves which are movable relative to one another between a first position wherein the halves are adjacent to one another and a second position wherein the halves are separated, the halves, when in the first position, defining a space between them having separate volumes, one of the volumes being shaped to hold a subassembly including a first electronic component having an encapsulant formed thereon and the other volume being shaped to hold a subassembly including excess encapsulant, and the encapsulant being connected to and at least partially severable from the excess encapsulant while the subassemblies are in the volumes;

a retainer having a first portion secured to the first half and having a second portion securing a first of the subassemblies, and moving the first subassembly with the first half when the halves are moved from the first to the second position; and

a separator secured to the first half and having a first surface contacting a second of the subassemblies, the first surface moving away from the first half when the halves are moved from the first to the second position and biasing the second subassembly away from the first half toward the second half.

2. The degater of claim 1, wherein the excess encapsulant is at least partially severed from the encapsulant of the electronic component when the halves are moved from the first position to the second position.

3. The degater of claim 1, wherein a surface of one of the halves includes a recess being shaped to receive at least a portion of one of the subassemblies when the halves are in the first position.

4. The degater of claim 1, wherein a surface of one of the halves includes aligning supports positioned to support one of the subassemblies when the halves are in the first and second positions.

5. The degater of claim 1, wherein the volumes are adjacent to one another.

6. The degater of claim 1, wherein the excess encapsulant includes a cull and a runner.

7. The degater of claim 6, wherein the encapsulant is formed on all sides of the electronic component.

8. The degater of claim 1, wherein the second portion of the retainer includes a surface that adhesively attaches to the first subassembly.

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9. The degater of claim 8, wherein the second portion of the retainer is a suction cup.

10. The degater of claim 1, wherein the separator is a pin which is at least partially retracted into the first half when the halves are in the first position and is at least partially extended out from the first half when the halves are in the second position.

11. The degater of claim 1, wherein a first of the volumes includes the first subassembly, a second of the volumes includes the second subassembly, and a third of the volumes includes a third subassembly having a second electronic device with encapsulant thereon, the encapsulant of the second electronic device being secured to and partially severable from the excess encapsulant of the first subassembly.

12. The degater of claim 11, wherein the first volume is adjacent to the second and third volumes, and the second and third subassemblies are connected by the first subassembly.

13. The degater of claim 1, further comprising a hinge assembly securing the first half to the retainer, the hinge assembly having an axis, wherein the first half can

pivot about the axis and relative to the retainer.

14. The degater of claim 1, further comprising a component with first and second portions, the first portion contacting a surface of the first half and the second portion contacting a second surface of the separator, the portions being biased relative to one another.

15. A degater comprising:

first and second supports mutually positionable relative to each other between a first position wherein the supports are adjacent to each other and a second position wherein the supports are separated from each other, the supports, when in the first position, defining a space between them having first, second, and third volumes, the first and second volumes being shaped to hold first and second electronic components respectively, each having encapsulant formed thereon, and the third volume being shaped to hold excess encapsulant, wherein the excess encapsulant attaches the first electronic component to the second electronic component;

a retainer having a first portion secured to the first support and a second portion in the shape of a cup adhesively secured to the excess encapsulant, and detaching the excess encapsulant from the encapsulant of the electronic components when the supports move from the first to the second position;

a plurality of support pins secured to the first support and having surfaces

contacting the electronic components when the supports are in the first position, the surfaces extending from the first support and biasing the electronic components against the second support as the supports move from the first to the second position.

16. The degater of claim 15, wherein the first support has first and second portions, the first portion forming the first volume with the second support and the second portion forming the second volume with the second support.

17. The degater of claim 16, further comprising a hinge assembly securing the first and second portions of the first support to the retainer, the hinge assembly having first and second axes, wherein the first portion can pivot about the first axis and the second portion can pivot about the second axis.

18. A method for degating an encapsulated microelectronic device, comprising:
supporting and encapsulated microelectronic device having subassemblies at least partially severable from each other, one of the subassemblies including an electrical component with an encapsulant formed thereon and another of the subassemblies including excess encapsulant, a first support supporting a first side of a first subassembly and a second support supporting a second side of the first subassembly such that the first and second supports are adjacent to one another and the first subassembly is secured therebetween;

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securing a retainer, movable with one of the supports, to a second of the subassemblies;
at least partially detaching the first subassembly from the second subassembly;
separating the first and second supports away from each other, the retainer
moving with one of the supports; and
biasing a first support member, secured to and movable relative to the first
support, against the first subassembly and toward the first support while separating
from the second support.

19. The method of claim 18, wherein the detaching includes pivoting the first and
second supports, together as a unit, relative to the retainer.

20. The method of claim 19, wherein the excess encapsulant is at least partially
severed from the encapsulant of the microelectronic device when the supports are
separated from each other.